

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT *M 8011*

TO : The File

DATE: 24 November 1953

FROM :

STAT

SUBJECT: Test & Evaluation of the [] Facsimile
Cipherring Equipment

50X1

1. Attached herewith are further results of subject tests using the [] page printing facsimile equipment mentioned in paragraph five of last progress report on subject equipment.

50X1

STAT

Attachment

DOC	19	REV DATE	14/3/80	BY	037169
ORIG COMP	33	OPI	56	TYPE	02
ORIG CLASS	5	PAGES	10	REV CLASS	C
JUST	22	NEXT REV	2010	AUTH:	HR 10-2

CONFIDENTIAL

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Engineering Division, OC

DATE: 23 November 1953

FROM :

STAT

SUBJECT: Test & Evaluation of the Facsimile
Cipherring Equipment

50X1

1. This is the result of the first test transmission using the medium speed facsimile equipment type in conjunction with the subject equipment. The copy of the letter attached is copy-monitored at the transmitting terminal. The third page attached is the original copy used for this transmission.

50X1

50X1

2. The transmission took place over the secure cable installation between room 9, 350-26th street and room 1416 M Building. The transmitting facilities were located in the OCD Machine Division scanning room and the copy was received in the Office of the Chief, Reference Branch.

3. The major difficulties encountered in setting up this test involved the AC line voltage regulation and the facsimile equipment carrier frequency. AC line voltage feed to the scanning drum had to be increased to maintain synchronization; the carrier frequency had to be lowered from 10KC to 6KC in order to get within the limits of Tests will be continued on this equipment for the purpose of evaluation and demonstration.

50X1

4. These tests have been coordinated with NSA and OC3.

STAT



FORM NO. 64

CONFIDENTIAL

Office Memorandum • UNITED STATES GOVERNMENT**TO :** Chief, Engineering Division, OC**DATE:** 23 November 1953**FROM :** [REDACTED]

STAT

SUBJECT: Test & Evaluation of the [REDACTED] Facsimile
Ciphering Equipment

50X1

1. This is the result of the first test transmission using the [REDACTED] medium speed facsimile equipment type [REDACTED] in conjunction with the subject equipment. The copy of the letter attached is copy-monitored at the transmitting terminal. The third page attached is the original copy used for this transmission.

50X1

2. The transmission took place over the secure cable installation between room 9, 350-26th street and room 1416 M Building. The transmitting facilities were located in the OCD Machine Division scanning room and the copy was received in the Office of the Chief, Reference Branch.

3. The major difficulties encountered in setting up this test involved the AC line voltage regulation and the facsimile equipment carrier frequency. AC line voltage feed to the scanning drum had to be increased to maintain synchronization; the carrier frequency had to be lowered from 10KC to 6KC in order to get within the limits of [REDACTED]. Tests will be continued on this equipment for the purpose of evaluation and demonstration.

50X1

4. These tests have been coordinated with NSA and OCS.

STAT



MONITORED COPY

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Engineering Division, OC

DATE: 23 November 1953

FROM : [REDACTED]

STAT

SUBJECT: Test & Evaluation of the [REDACTED] Facsimile
Ciphering Equipment

50X1

1. This is the result of the first test transmission using the [REDACTED] medium speed facsimile equipment type [REDACTED] in conjunction with the subject equipment. The copy of the letter attached is copy-monitored at the transmitting terminal. The third page attached is the original copy used for this transmission.

50X1

50X1

2. The transmission took place over the secure cable installation between room 9, 350-26th street and room 1416 N Building. The transmitting facilities were located in the OGD Machine Division scanning room and the copy was received in the Office of the Chief, Reference Branch.

3. The major difficulties encountered in setting up this test involved the AC line voltage regulation and the facsimile equipment carrier frequency. AC line voltage feed to the scanning drum had to be increased to maintain synchronization; the carrier frequency had to be lowered from 10KC to 6KC in order to get within the limits of [REDACTED]. Tests will be continued on this equipment for the purpose of evaluation and demonstration.

50X1

4. These tests have been coordinated with NSA and OCS.

STAT

DECIPHERED COPY

CONFIDENTIAL

SECRET

ROUTING AND RECORD SHEET

INSTRUCTIONS: Officer designations should be used in the "TO" column. Under each comment a line should be drawn across sheet and each comment numbered to correspond with the number in the "TO" column. Each officer should initial (check mark is sufficient) before further routing. This Routing and Record Sheet should be returned to Registry

FROM:	NO.
OC-2 MAD-EP	DATE 24 November 1953

TO	ROOM NO.	DATE		OFFICER'S INITIALS	COMMENTS
		SEARCHED	INDEXED		
1. OC-2					Information
2. OC-2					
3. OC-2					
4. OC					
5. OC-AD	4 350 26th St.				File
6.					
7. OC-2/MAD-EP					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

Deciphered Copy

SECRET

ROUTING AND RECORD SHEET

INSTRUCTIONS: Officer designations should be used in the "TO" column. Under each comment a line should be drawn across sheet and each comment numbered to correspond with the number in the "TO" column. Each officer should initial (check mark insufficient) before further routing. This Routing and Record Sheet should be returned to Registry.

FROM:

OC-E MAD-EP

NO.

DATE

24 November 1953

TO	ROOM NO	DATE		OFFICER'S INITIALS	COMMENTS
		REC'D	FILED		
1. OC-E					Information
2. OC-EL					
3. OC-S					
4. OC					
5. OCD-AD	4 350 26th St.				
6.					
7. OC-E/MAD-EP					File
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

MONITORED COPY

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T E F L O N

Security Information

CONFIDENTIAL

Teflon, the trade name for polytetrafluoroethylene, is a synthetic resin having a unique set of properties which offer a great deal to the design engineer. Teflon has a waxy, chalk white appearance, and is classified as a thermoplastic resin, although the polymer does not melt and flow as do the conventional thermoplastics. Teflon can be molded into simple shapes by cold pressing and sintering, using techniques similar to those practiced in powder metallurgy. However, it is usually preferable to fabricate pieces from rod, strip, or tubing as the material is readily machined or blanked.

The chemical inertness of Teflon is outstanding. The only materials which attack Teflon are the molten alkali metals and fluorine and chlorine trifluoride at high temperatures and pressures. Being almost completely inert, it has been used as gaskets and seals under the most severe acid, solvent, or caustic conditions and has stood up over a year in operations where other materials lasted only a few weeks. Teflon also has a wide service temperature range of -100°F. to 400°F. Thus the unique thermal and chemical properties of this material recommend it for a wide number of applications in the chemical process industries.

Teflon has truly outstanding electrical properties, especially when considered in combination with its chemical inertness and resistance to elevated temperatures. As a low-loss dielectric material, Teflon is comparable to any known solid dielectric. The electrical properties of Teflon are practically unchanged over its wide service temperature range. The short-time dielectric strength is as high as 1000 to 2000 volts per mil in thicknesses of from 2 to 10 mil; it has been reported that the long-time dielectric strength is in excess of 1000 volts per mil in the absence of corona; however, unless the design precludes the possibility of corona, the long-time dielectric strength should be limited to 50 volts per mil. The electrical loss factor is less than 0.0005 over the frequencies from 60 cps to 30,000 mc. The dielectric constant of 2.0 to 2.05 does not change over the entire frequency range measured to date. The arc resistance of Teflon is excellent and the volume resistivity is well over 10^{15} ohm-cm. Tests have indicated that failure from a carbonized path will not occur in Teflon.

In addition to the excellent chemical and electrical properties, Teflon has many other interesting properties. Teflon is tough and resilient, has no water absorption and is unaffected by outdoor weathering, corrosion, or fungus attack. Teflon has unusual anti-sticking properties; nothing adheres to it with any appreciable strength.

(DECIPHER COPY)

THE POLYMER CORPORATION
OF PENNSYLVANIA

CONFIDENTIAL

TEFLON

Teflon, the trade name for polytetrafluoroethylene, is a synthetic resin having a unique set of properties which offer a great deal to the design engineer. Teflon has a waxy, chalk white appearance, and is classified as a thermoplastic resin, although the polymer does not melt and flow as do the conventional thermoplastics. Teflon can be molded into simple shapes by cold pressing and sintering, using techniques similar to those practiced in powder metallurgy. However, it is usually preferable to fabricate pieces from rod, strip, or tubing as the material is readily machined or blanked.

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(MONITORED COPY)

THE POLYMER CORPORATION
OF PENNSYLVANIA

READING, PENNSYLVANIA

1/20/62 TIME 16:00 DATE RELEASED TIME: INDEX No. 3318

1. HAND CARRIED BY: 2. MAILED: TIME: STAT

INDEX OF REQUEST REQUESTED

DESCRIPTION OF INFORMATION

1. MESSAGE ☒ 2. FROM ☐ 3. PERSONALITY PHOTO ☐ 4. CODE ☐

5. SIGN PHOTO ☐ 6. I.T.B. ☐ 7. BIOGRAPHIC REG. ☐ 8. LIBRARY ☐

SUBJECT	AREA	SEARCH	1. ALL ☒ 2. SPECIFIC ☐
60-1000	TYPE & location	SECURITY CLASS.	SOURCE OF INFORMATION
217.4	TYPE & location	ONLY	
117	TYPE		
417	TYPE		
614.98	R.A. location	LOCATION NO.	PUBLICATION DATES
			FROM
			TO
SPECIAL INSTRUCTIONS TO OPERATOR			
Circ. by: I 3258			
DATE REQUIREMENT			
PRIORITY B			
NO. OF TAPES 1			

OVERLAP

SEARCHER NAME SEARCHED	PREPARATION FOR RELEASE	INITIALS	REMARKS	GRAPHS TAKEN
Search Time	Total Cards Provided			
Classical	No. Duplicates Selected			
Machine	Total References Provided			
Indexed by	No. References Returned			
File	No. Tapes Edited			

MACHINE ROOM SEARCH		PREPARATION FOR RELEASE	INITIALS	VOLUME	ELAPSED TIME
Lapsed Time		Total Cards Provided			
Clerical		No. Duplicates Selected			
Machine		Total References Furnished			
Completed by		No. References Scanned			
Date		No. Tapes Edited			
Time					